

## **Appendix B**

### **Notice of Preparation (NOP)**

#### **Index to Location Where Each Individual NOP Comment is Addressed in EIR**

#### **Comments on NOP**

**CALIFORNIA STATE LANDS COMMISSION**

100 Howe Avenue, Suite 100-South  
Sacramento, CA 95825-8202

**PAUL D. THAYER, Executive Officer***California Relay Service From TDD Phone 1-800-735-2922**from Voice Phone 1-800-735-2929**Contact Phone: (916) 574-1890**Contact FAX: (916) 574-1885*

**NOTICE OF PREPARATION OF  
A DRAFT ENVIRONMENTAL IMPACT REPORT  
AND NOTICE OF PUBLIC SCOPING MEETING**

*CSLC EIR No.: 730*

File Ref: PRC 3904.1; W30068.5

SCH No.: 2004071075

**Date:** July 14, 2004**To:** Interested Parties**Project:** Venoco Ellwood Marine Terminal (EMT) Lease Renewal  
(State Oil and Gas Lease PRC-3904.1).**Applicant:** Venoco, Inc.  
5464 Carpinteria Avenue, Suite 1  
Carpinteria, California 93013-1423**Location:** The project consists of on- and offshore components. The onshore component is located adjacent to the Pacific Ocean, 0.75 mile northwest of Coal Oil Point, Santa Barbara County, California, approximately one mile west of the intersection of Storke and El Collegio Roads in the City of Goleta. The offshore component extends 2,600 feet from the shore in approximately 60 feet of water.**Project Description:**

Venoco, Inc. (Venoco) is a privately held, independent oil and gas company that is seeking approval from the California State Lands Commission (CSLC) to renew its lease (Lease PRC 3904.1) for an additional 10 years (until February 28, 2013). This would allow Venoco to continue operating the Ellwood Marine Terminal (EMT), a crude oil marine loading terminal and associated storage facility. Crude oil is first stored in two onshore tanks and then pumped into a pipeline for loading into a dedicated barge. The EMT has an average barge loading rate of 4,200 barrels (bbls) per hour with a maximum barge capacity of a total of 56,000 bbls. Typically, a dedicated barge is loaded two to three times per month with 55,000 bbls of crude oil per load. The oil is

then transported to refineries in the Port of Los Angeles area. The offshore facilities consist of an irregular six-point mooring system located 2,600 feet from shore, two additional buoys, a 10-inch-diameter marine loading pipeline that extends from the beach to the mooring area, and a 240-foot long rubber hose connected to the offshore end of the pipeline.

**Purpose of Public Scoping Process:**

The California State Lands Commission (CSLC) will be the Lead Agency under the California Environmental Quality Act (CEQA) and will prepare an Environmental Impact Report (EIR) for the offshore component of the Ellwood Marine Terminal.

The purpose of this Notice of Preparation / Notice of Public Scoping Meeting is to obtain agency and the public's views as to the scope and content of the environmental information and analysis, including the significant environmental issues and reasonable alternatives and mitigation measures, that should be included in the draft EIR. Applicable agencies will need to use the EIR when considering related permits or other approvals for the Project.

The Project description, location, and potential environmental effects are discussed in the attached Scoping Document. Due to the time limits mandated by State law, written comments must be sent by **August 13, 2004**. Please send your comments at the earliest possible date to:

Marina R. Brand  
California State Lands Commission  
100 Howe Avenue, Suite 100-South  
Sacramento, CA 95825  
FAX: (916) 574-1885  
E-mail: Brandm@slc.ca.gov

Pursuant to Section 15083, Title 14, California Code of Regulations, the CSLC will also conduct two public scoping meetings for the proposed Project to receive oral testimony at the time and place listed below:

**DATE:** ***August 3, 2004***

**TIME:** 4:00 p.m. and 7:00 p.m.

**LOCATION:** *Goleta Valley Community Center*  
*5679 Hollister Avenue*  
*Goleta, CA 93009*  
*(805) 967-1237*

If you have any questions or would like a copy of this notice, please contact Marina Brand at the above address, by calling (916) 574-1938, or by e-mail to brandm@slc.ca.gov. Copies of this notice will also be available at the Public Scoping Meeting.

Signature: \_\_\_\_\_ Date: July 14, 2004  
Marina R. Brand, Staff Environmental Scientist

## 1.0 PROJECT DESCRIPTION

### 1.1 INTRODUCTION

The EIR will evaluate the potential environmental effects of a project proposed by Venoco, Inc. (Applicant) to resume oil production (Project) on State Tidelands Lease PRC 421.1 (PRC 421) adjacent to the city of Goleta, Santa Barbara County (Figure 1). A description of the project, its location and components is followed by the anticipated project schedule. Subsequent sections describe potential alternatives to the proposed Project, potential environmental impacts that would be addressed in the EIR, and the criteria that will be utilized to develop mitigation measures necessary to reduce potentially significant- impacts to a less-than-significant level.

### 1.2 PROJECT OBJECTIVE

Venoco is a privately held, independent oil and gas company that has filed an application with the California State Lands Commission (CSLC) to return oil and gas lease PRC 421 to oil production after ongoing production was temporarily shut-in in 1993. Based on current projections, the estimated productive life of PRC 421 would be twelve years and production is expected to be no more than an average of 700 barrels of oil per day (BOPD) in the first year, tapering off to approximately 100 BOPD by year 12 (Table 1).

Table 1. Projected Average Oil Production of PRC 421 Over the Twelve-Year Lifespan.

Year	Oil BOPD	Water BWPD	Year	Oil BOPD	Water BWPD
1	680.0	120.0	7	256.5	358.3
2	578.0	144.0	8	218.0	430.0
3	491.3	172.8	9	185.3	516.0
4	417.6	207.4	10	157.5	619.2
5	355.0	248.8	11	133.9	743.0
6	301.7	298.6	12	113.8	891.6

BOPD = barrels of oil per day; BWPD = barrels of water per day

### 1.3 SETTING

#### 1.3.1 Geographic Setting

The existing facilities at Lease PRC 421 include two piers on State tide and submerged lands below the bluffs marking the southern limit of the Sand Piper Golf Course (Figure 2). Access to the facilities is provided by a road originating near Venoco's Ellwood

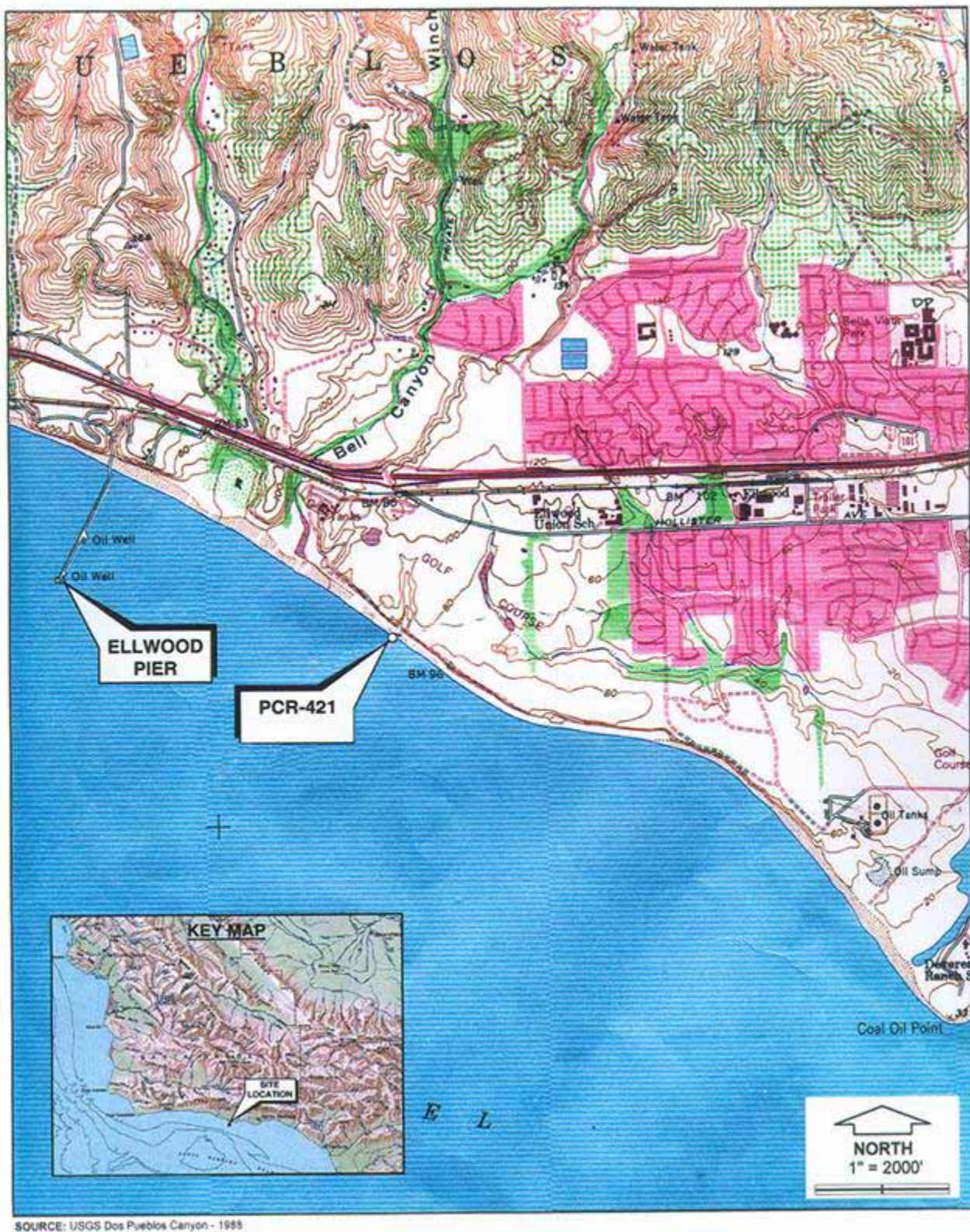


FIGURE 1

REGIONAL AND SITE LOCATION MAP



SOURCE: Pacific Western Aerial

**FIGURE 2**

**AERIAL PHOTOGRAPH  
OF PROJECT AREA**

Onshore Facility (EOF) and oil was previously exported by a six-inch pipeline connecting to Line 96 (Exxon-Mobil Pacific Onshore Transfer Pipeline). Portions of the access road and the pipeline lie within easements granted to Venoco by predecessors in interest of the Sand Piper Golf Course and are located in the city of Goleta, Santa Barbara County. The two piers provide support for two wells located on separate concrete caissons, identified as Well 421-1 (water injection) and Well 421-2 (oil production). Each steel pile pier contains concrete caissons that are approximately 67 feet long, 42 feet wide and rise approximately 20 feet above mean sea level. The piers are located one half mile south of the EOF.

### **1.3.2 Background**

The Ellwood Field trends east-west along the shoreline just south of the Sandpiper Golf course. The field is about four miles long and a half-mile wide. The field was discovered by Barnsdall Oil Company in July 1928 when the Luton-Bell No. 1 was completed flowing 1,755 BOPD of 37.8° American Petroleum Institute (API) low sulfur oil from the Lower Miocene Vaqueros formation. Development of the onshore acreage began in the late 1920s and exploitation of much of the greater tidelands section of the field started in the early 1930s using wells drilled from piers. The two remaining 421 wells were drilled from piers during 1929-1930. Peak production, of nearly 49 thousand barrels of oil per day, occurred in 1930. Early wells commonly flowed about 2,500 barrels of clean oil daily, but water encroachment and decreases in pressure necessitated the use of gas lift and pumping. The existence of a second Western structural high was determined from well 428-9 in 1937. The entirely offshore Western high was developed using high angle wells drilled from shore during the 1940s from Signal's Dos Pueblos property into State Leases PRC 129 and 208. The last producing wells were completed in the 1960s. Most of the wells located on piers were abandoned in the 1950s. Arco continued to produce the Dos Pueblos wells until 1993 and abandoned the wells in 1996.

Recent production information is only available for well 421-2 since it is the only remaining production well. The gravity of the oil from 421-2 is 35°. Well 421-1 initially tested in 1929 at 3,220 BOPD with a gravity of oil at 36.1°. Well 421-1 has not produced oil since 1972 and from 1972 to 1994, well 421-1 was used as a water disposal well. Table 2 provides a summary of the production from the PRC 421 wells.

Platform Holly is a self-contained, triple-decked, oil drilling and production platform built on PRC 3242.1 in 1966 to produce the reserves from the Rincon formation and has

been in continuous operation ever since. Process and control equipment, drilling systems and living quarters have all been revamped in recent years. The platform sits in about 211 feet of water. The boat landing on the platform is at approximately 14 feet and a heliport pad is at approximately 81 feet above sea level. Presently, 30 well slots exist on the platform.

The platform produces oil/water emulsion and natural gas that are separately transported via subsea pipelines to the EOF. A portion of the produced gas is compressed to high pressure and recycled for artificial lift (gas lift) in producing wells.

The production rate from the platform has reached as high as 17,000 barrels (bbls) of wet emulsion per day (11,000 BOPD and 6,000 BWPD). Platform Holly is currently permitted for a production rate of 20,000 bbls of oil emulsion per day and 20,000 thousand cubic feet per day (MCFD) of gas. Current production from the Platform is approximately 3,500 BOPD, 10,000 BWPD, and 4,700 MCFD of gas.

Table 2. Production History for 421-1 and 421-2 (1928-2004)

Year	Oil MB	Water MB	Gas Mcf	Winj MB	Year	Oil MB	Water MB	Gas Mcf	Winj MB
1928	0.0	0.0	0.0	0.0	1970	8.6	0.0	77.7	0.0
1929	109.2	0.0	37.5	0.0	1971	8.1	0.5	73.2	0.0
1930	599.7	344.7	277.2	0.0	1972	13.3	2.3	24.0	0.0
1931	627.7	245.3	89.4	0.0	1966	8.6	0.0	95.2	0.0
1932	247.5	35.2	49.7	0.0	1967	9.7	0.0	99.0	0.0
1933	193.5	27.3	21.7	0.0	1968	11.8	0.0	108.4	0.0
1934	131.9	7.7	31.5	0.0	1969	10.4	0.0	93.7	0.0
1935	121.3	4.7	124.5	0.0	1970	8.6	0.0	77.7	0.0
1936	86.3	10.5	123.5	0.0	1971	8.1	0.5	73.2	0.0
1937	55.2	10.7	160.4	0.0	1972	13.3	2.3	24.0	0.0
1938	26.8	9.1	147.2	0.0	1973	11.3	2.6	78.0	0.0
1939	24.4	10.4	171.7	0.0	1974	7.6	1.9	70.3	90.0
1940	20.2	15.1	243.0	0.0	1975	12.7	2.5	75.5	90.0
1941	24.6	16.7	150.4	0.0	1976	15.1	3.3	103.4	90.0
1942	18.6	20.3	113.0	0.0	1977	12.2	2.6	85.9	93.0
1943	18.6	24.1	96.6	0.0	1978	14.0	3.3	98.8	99.0
1944	19.8	26.2	99.7	0.0	1979	14.3	2.7	101.0	101.0
1945	22.4	41.7	137.2	0.0	1980	15.1	3.5	122.4	122.0
1946	23.3	88.1	155.9	0.0	1981	15.6	3.2	126.1	126.0
1947	17.3	85.0	127.1	0.0	1982	17.1	3.6	138.1	138.0
1948	13.0	29.8	108.9	0.0	1983	15.0	2.8	105.6	106.0
1949	12.0	15.7	98.7	0.0	1984	18.9	3.4	144.6	144.0
1950	15.0	85.9	80.9	0.0	1985	16.2	3.0	119.9	119.0
1951	12.1	57.8	63.2	0.0	1986	17.9	1.2	127.2	127.0
1952	7.7	0.0	69.6	0.0	1987	18.8	0.3	128.0	128.0
1953	7.0	0.0	113.1	0.0	1988	18.6	0.0	120.1	120.0

Year	Oil MB	Water MB	Gas Mcf	Winj MB	Year	Oil MB	Water MB	Gas Mcf	Winj MB
1954	6.9	0.0	86.2	0.0	1989	22.4	0.0	129.8	129.0
1955	7.1	0.0	60.5	0.0	1990	20.2	0.0	115.7	116.0
1956	8.4	0.0	62.9	0.0	1991	15.5	0.0	80.0	80.0
1957	8.4	0.6	82.1	0.0	1992	19.9	0.0	90.6	91.0
1958	8.7	0.0	71.5	0.0	1993	8.1	0.0	39.5	82.0
1959	8.2	0.0	74.2	0.0	1994	0.0	0.0	0.0	0.0
1960	8.4	0.0	97.1	0.0	1995	0.0	0.0	0.0	0.0
1961	7.1	0.0	93.7	0.0	1996	0.0	0.0	0.0	0.0
1962	6.7	0.0	88.9	0.0	1997	0.0	0.0	0.0	0.0
1963	5.4	0.0	71.4	0.0	1998	0.0	0.0	0.0	0.0
1964	7.7	0.0	76.8	0.0	1999	0.0	0.0	0.0	0.0
1965	8.6	0.0	94.5	0.0	2000	1.8	0.0	0.0	0.0
1966	8.6	0.0	95.2	0.0	2001	16.5	0.0	0.0	0.0
1967	9.7	0.0	99.0	0.0	2002	0.0	0.0	0.0	0.0
1968	11.8	0.0	108.4	0.0	2003	0.0	0.0	0.0	0.0
1969	10.4	0.0	93.7	0.0	2004	0.0	0.0	0.0	0.0

MB = thousand barrels; Mcf = thousand cubic feet; Winj = Water injection

## 1.4 PROJECT COMPONENTS

### 1.4.1 Lease 421 Wells

Currently, both PRC421 wells are shut-in and equipped with subsurface safety valves and packers. Venoco, Inc. proposes to place both 421 wells back into service. Under this proposal, well 421-2 would be equipped with an Electric Submersible Pump ("ESP"), which would be located inside the casing of the well approximately 2,000 feet below ground level. Instrumentation and well control devices would be located near the wellhead and connected to remote alarm annunciation devices at the EOF. At no point will the fluids produced from the proposed Project enter the EOF.

#### Well 421-1

Well 421-1 would be returned to service as a water injection well. The source of water to be disposed of would be water that is separated from the gross fluid produced out of well 421-2. A Flow Safety Valve (FSV) will be installed as part of the wellhead piping to prevent reverse flow occurring from the well.

A workover rig will not be required to prepare 421-1 for injection service. The concrete coffer dam wall of the caisson has been permanently repaired by implementing the structural enhancements detailed in Venoco's proposal to the State Lands Commission dated February 23, 2004.

## **Well 421-2**

Well 421-2 will have a downhole ESP pump installed (see workover program in attachment 2). A motor control panel (Centrilift 200 kVA Variable Frequency Drive) and a step-up transformer located at the EOF will supply 1500V power to the pump. For security reasons, the motor control panel and transformer will be located at the EOF rather than at the 421-2 pier. The ESP transformer and control panel would connect to 421-2 via a direct buried 200 kVA power cable. A second utility electric power cable will be laid in the same excavation with an integral communication cable for data transfer for supervisory control and data acquisition (SCADA) purposes. Utility power (480V) will be supplied to the 421-2 pier and a small step down transformer will be installed in an electrical panel to drop the voltage to 120V. A 120V power receptacle will be provided at the 421-2 well site to support future well testing, data transmission, chemical injection, or temporary lighting, should the need arise. A 120V utility power outlet will be located inside of the power panel, and will be a heavy duty, 20 Amp, "Arktite" type of plug receptacle. This type of receptacle requires specially designed mating plugs which are circuit breaking and require a twist to lock action in order to engage or disengage.

The wellhead will be equipped with current safety equipment and follow safety design criteria as specified in API RP 14C, *Safety Analysis Function Evaluation (SAFE) of Offshore Petroleum Production Systems*. These standards will provide, at a minimum, for the installation of a Sub-Surface Safety Valve (SSSV) and Surface Safety Valve (SSV) on the well. The oil discharge line will be equipped with High and Low pressure sensing switches. In the event that these switches report high or low pressure, or in the event that any alarm forces a shutdown of the well, then the Surface Safety Valve and Sub Surface Safety Valve will automatically close and prevent oil being brought to the surface. To assure fail-safe operation, these valves will be designed to normally close in the absence of any power or energy to hold them open. The SSV will use a charge of nitrogen or hydraulic fluid to hold it open, and the SSSV will depend upon a hydraulic fluid source to hold it open. In the event of a shutdown scenario calling for closing of the SSV and SSSV valves, a solenoid will release a small amount of nitrogen pressure or hydraulic fluid to a storage tank and the valves will spring closed. A small pump will be provided to allow re-energization of the SSV and the SSSV valves when a well is restarted after a shutdown. The selection of the SSV and SSSV well actuators has been made to maintain a very low surface profile.

A trio of stainless steel equipment enclosures will be located at the wellhead, one used to house the gross oil meter, another to house the wellhead safety control panel,

including high/low pressure pilots, hydraulic reservoir, and other necessary actuation equipment, and a third electrical box to house the utility power transformer and receptacle and electronics associated with the metering and communication of safety signals. The meter box is expected to be roughly 40 cubic feet in size, while the wellhead safety control panel and electrical panel are each expected to be 36 cubic feet in size. The electrical panel will also house the electrical service receptacle, an auxiliary stop switch to be used by well servicing personnel, and will include a tamper switch to alert staff at the EOF of possible tampering. A surveillance camera will be mounted on the 421-2 pier to monitor the condition of the piers. The live video feed will be displayed in the EOF control room.

The downhole pump is also provided with a multi-sensor to monitor downhole conditions such as motor load, motor winding temperature, intake temperature, intake and discharge pressures, pump vibration. This data will be transmitted over the power feed back to the motor control panel located at the EOF. The motor control panel will incorporate safety switches to automatically shut-in the pump in the event of a deviation from normal operating conditions such as might be caused by a pipeline rupture or a process interrupt.

At the Line 96 tie-in, a Flow Safety Valve (FSV) will be provided to prevent backflow of oil from the pipeline, thus providing protection against uncontrolled oil flow in the event of a catastrophic oil line failure. The 421-2 caisson will undergo repairs comparable to those already completed at Pier 421-1.

#### **1.4.2 Proposed Crude Oil Separation Sequence**

Separation of the produced oil, water, and gas will employ cyclonic technology. The use of cyclonic technology was chosen by the Applicant due to the reduced footprint requirements, compact size, and lack of moving parts. The Applicant maintains that the use of this type of separation technology also reduces the visual impact, and greatly simplifies the on-site maintenance, volume, and control requirements as compared to other more conventional technologies, such as Free Water Knock Out (FWKO) vessels, oil water separators, etc.

The production from the 421-2 well will be first routed into a Gas-Liquid Cyclone Separator (GLCS) located on the North East corner of the 421-2 caisson. The GLCS is a compact vertical vessel with a tangential nozzle located near the top. Incoming gross fluids will be subject to a hydraulically created vortex and resultant centrifugal forces,

1 causing the heavier liquid particles to separate and thus obtaining split liquid and gas  
2 streams. The produced gas, which is separated from the gross fluids, will be routed  
3 through the top of the GLCS vessel for collection in an injection pipeline. A  
4 backpressure control valve will maintain desired backpressure on the gas side to ensure  
5 maximum separation efficiency. A meter will then be used to measure the amount of  
6 produced gas.

7 Liquids that are separated from the gas by the GLCS will be routed through a liquid  
8 Hydrocyclone separator located on the same skid, next to the GLCS. This vessel is  
9 also a compact, vertical vessel, which converts incoming pressure energy into  
10 centrifugal force, to promote separation of immiscible fluids of differing densities. An  
11 involute inlet is used to introduce a vortex in the fluid stream, thus driving the heavier  
12 particles (water) to the internal walls of the vessel and the lighter, oil particles into a  
13 central collection tube. The respective oil and water streams which are produced will be  
14 metered using Micro-Motion Coriolis meters, and the oil stream will be sent to the Line  
15 96 for sales, and the water will be commingled with the produced gas and sent to  
16 existing well 421-1 initially and to Platform Holly at a later time for injection. No process  
17 equipment is to be installed aboard platform Holly as part of this project. Individual  
18 backpressure control valves on the oil and water streams will allow adjustment for  
19 optimum separation efficiencies. No water injection pumps will be installed at 421-1.  
20 The discharge pressure of the ESP will be sufficient to dispose of the produced water  
21 and gas.

### 22 **1.4.3 Pipelines**

#### 23 **Oil Pipeline**

24 An existing wrapped and coated six inch shipping line runs from the 421-1 pier along a  
25 Venoco right-of-way approximately 1,300 feet along the old seawall to a point just south  
26 of the 12<sup>th</sup> tee of Sand Piper and then turns north into the Holly pipeline right of way and  
27 runs another 500 feet to the edge of the EOF. It connects to Line 96 at a valve box  
28 located on an easement granted to Venoco that lies just outside the limits of the EOF  
29 parcel, south of the heliport. This line was last hydrotested by Mobil in March 1994.  
30 The existing shipping line will be hydrotested to 100 psi and internally coated with a new  
31 plastic coating, as described below. The six-inch pipe will be protected against external  
32 corrosion by enhancing the impressed current cathodic protection system on the Holly  
33 pipelines to include the Lease 421 shipping line.

1 A pair of new two inch flowlines will be inserted inside of the existing six-inch pipeline;  
2 one line will be used to transport oil, and the other line will be used to transport  
3 produced water and gas.

4 Both flow lines will have a maximum operating pressure of 275 psig and a minimum  
5 hydrotest pressure of 425 psig and be rated for continuous operation at temperatures  
6 up to 130° F. At a minimum, the pipeline will hold the indicated test pressure for a  
7 period of not less than 8 hours. Hydrotest water will be provided by the Goleta Water  
8 District connection located at the EOF and drained back to the EOF when hydrotesting  
9 is finished. The returned hydrotest water will be introduced into the oil processing  
10 system for treatment and disposal. A leak detection sensor will be provided within the  
11 six-inch line, which provides the annular space of the double wall piping system to  
12 provide indication and automatic shutdown in the event of a leak. In the event of a leak,  
13 the ESP well will be automatically shut in and an alarm will sound at the EOF.

14 Double wall piping will also be used for the exposed sections of the flowlines installed  
15 on the pier causeway. The primary carrier pipe on the pier causeway will also be  
16 protected by an outer containment pipe. This outer containment pipe will be monitored  
17 by the same monitoring system that monitors the six-inch containment piping onshore.  
18 The caissons of 421-1 and 421-2 will contain any potential leaks from the wellhead  
19 piping. Each well will also be equipped with a level switch to detect and alarm the build-  
20 up of liquids in the cellar.

21 In the event of a two-inch line leak, oil would be contained by the outer six inch pipe.  
22 Upon detection of liquid in the containment casing, or low pressure in the oil pipeline,  
23 the well pump will be shut in and the sub-surface and surface safety valves will close. It  
24 is expected that a complete shut-in would be affected within 15 seconds of leak  
25 detection.

26 The new two-inch flowlines will be steel coil tubing. The tubing will be purpose-  
27 designed and built for insertion service. The coil tubing will be two-inch diameter,  
28 0.156-inch wall thickness, high strength steel with a minimum yield strength of 52,000  
29 psi. The pipe will have a minimum pressure capacity of 3,500 psig. One or both of the  
30 flowlines will also be coated for corrosion protection, and to help reduce abrasion during  
31 the pipe pulling installation. The coating to be used will be either a factory applied  
32 Fusion Bonded Epoxy (FBE) system or an extruded polyethylene wrap system.

1 In the alternative, the Applicant proposes to utilize non-metallic pipe materials, such as  
2 fiberglass or high density polyethylene (HDPE) pipe. These materials offer good  
3 chemical resistance and excellent flexibility. Additionally, both materials are lighter and  
4 more flexible than traditional steel pipe, allowing a significant savings in time and  
5 equipment during installation. Because it is non-conductive and immune to galvanic  
6 electrochemical effects, fiberglass and HDPE will not corrode like metal piping. The  
7 material is also impervious to many aggressive chemicals as well as scale build-up. In  
8 the event the Applicant proposes to use an alternate pipe material, it will furnish  
9 additional technical information on the material. The final decision on the choice of  
10 material will be made after discussions with the US Department of Transportation,  
11 Office of Pipeline Safety.

## 12 **Produced Water and Gas Pipeline**

13 Produced water and gas will be routed through the second two-inch flowline to Well  
14 421-1 for re-injection. As an alternative and to provide back-up water injection, the two-  
15 inch flowline will continue inside the six inch shipping line to a tie-in point to the existing  
16 four-inch utility line that runs from the EOF to Platform Holly. The produced water and  
17 gas would then be injected in the Monterey formation of the South Ellwood field. This  
18 utility line runs alongside the six inch shipping line at the Line 96-valve box.

19 During the first years of production, produced water will be disposed of in Well 421-1.  
20 As the water cut of 421-2 increases and the gas production decreases, the produced  
21 water will be switched over to the second flowline and routed to Platform Holly for  
22 disposal.

## 23 **Oil and Produced Water and Gas Pipeline Installation**

24 The internal pipe coating for the six-inch oil pipeline will be applied using a process  
25 known as "fold and form" sliplining. This is a process in which a thin-wall, High Density  
26 Polyethylene (HDPE) liner is temporarily deformed, into a "heart" shape cross-section,  
27 which will then allow direct insertion into the existing six-inch oil pipeline. After insertion,  
28 the pipe is "inflated" back into its correct cross section. The inflation process is  
29 accomplished using low-pressure (<100 psig) air or water. In some cases, a heated  
30 media, such as hot water, may be used to aid in restoring the final shape of the liner.

31 Within the existing six-inch oil line, at a point close to the location of the 1994 leak after  
32 which production from Well 421-2 ceased, there is an exposed section with two 90°  
33 bends where the protective wrapping has been lost. A section of pipe, approximately 25

1 feet in length, will be cut out and replaced with new wrapped six-inch pipe. The section  
2 will also serve as an intermediate pulling point for both the six-inch slipline and the two  
3 internal flow lines.

4 A pulling winch will be located at this location and will pull the six inch "fold and form"  
5 liner from two insertion points. One insertion point will be located in the Pier 421 access  
6 roadway, and the other insertion point will be located adjacent to the existing Line 96  
7 tie-in vault located just outside the EOF fence, alongside the access roadway. After the  
8 liner has been pulled through each of the two pipeline segments, it will be inflated into  
9 final size and tested. The section of six-inch line between the two pulling locations will  
10 be temporarily left open in order to effect the pull of the two internal flowlines.

11 In a manner similar to the installation of the six inch "fold and form" liner, the two inch  
12 internal flow lines will be pulled into the now-internally lined six inch oil pipeline.  
13 Following integrity testing of the newly installed liner in the existing six inch pipeline, a  
14 pulling winch will again be located at the proposed pulling location. The two, two-inch  
15 flowlines will be pulled into this line from two directions; one insertion point will be  
16 located in the Pier 421 access roadway, and the other insertion point will be located  
17 adjacent to the existing Line 96 tie-in vault located just outside the EOF fence,  
18 alongside the access roadway. After the two flowlines have been pulled through each  
19 of the two pipeline segments, they will be fused together into one continuous segment  
20 and pressure tested. Final assembly will include installation of annular casing end seals  
21 and anchors at the ends of the existing six-inch outside pipe.

22 The final tie-ins will take place following successful integrity testing to the two, two-inch  
23 flowlines. Outside of the EOF, one line will be tied into the existing Line 96 pipeline, and  
24 the other line will be tied into the existing Platform Holly utility pipeline. Near Pier 421-1,  
25 the produced water/gas line will be looped within containment so as to serve the 421-1  
26 injection well. At Pier 421-2, both lines will be connected to the 421-2 production  
27 equipment.

28 At the conclusion of the flowline installation work, the discontinuous six inch  
29 containment piping at the pipe pulling location will be "clam shelled" back together  
30 again, thus providing continuous 100% containment. The re-installation will again be  
31 pressure tested to verify containment piping integrity.

32 No trenching will be required other than to expose the ends of the existing shipping line,  
33 and to open up an intermediate point to repair the exposed section of six inch pipe.

#### **1.4.4 Installation of Electrical Cables**

The ESP pump at Well 421-2 will receive power through a direct burial and armored 200 KVA, 1,100 VAC power cable that will run underground within the existing access easement. The maximum electrical power requirement to operate Well 421-2 is 115 kW. In addition, a smaller 480 VAC cable will also be installed in the same excavation. This cable will provide electrical power for metering, well instrumentation and control systems, utility power receptacle, and an integral communication cable for data transfer. The delivery voltage of the utility power will be 480V, and a small step-down transformer will be installed in the Well 421-2 electrical panel to drop the voltage down to 120V. The utility power outlet will be located inside of the power panel, and will be a heavy duty, 20 Amp, "Arktite" type of plug receptacle. As previously indicated, this type of receptacle requires specially designed mating plugs which are circuit breaking and require a twist to lock action in order to engage or disengage.

The proposed new electrical cables will require a minimum burial depth of 24 inches beneath the existing access road and will be designated with power cable markers along the route. The cable route will be surveyed and staked within the access road right of way. A 2,500 feet by one foot by 30-inch deep trench will be excavated. Six inches of sand bedding will be placed into the bottom of the ditch. The two power cables will be placed into the ditch, and backfilled with a concrete slurry mixture to a minimum depth of six-inches over the cables. The remainder of the ditch will be filled using materials excavated from the site, and the surface will be restored. The estimated area of cable excavation is 6,250 square feet. Additional excavation will be required to effect repairs to the existing six-inch oil line at the 12<sup>th</sup> tee area and to expose piping between Piers 421.1 and Pier 421.2.

#### **1.4.5 Communications**

The Motor Control panel at the EOF will provide a Modbus digital output. The Motor Contoller will communicate with the existing EOF Remote Monitoring System (RMS), via a new, dedicated, Modbus Plus Based, cable link. A program logic controller (PLC) installed in the Motor Controller will collect both wellhead and separator data from the 421-2 pier and downhole performance data from the ESP. The status of Well 421-1 will be monitored by controlling the pressures and rates on the injection line running from Well 421-2. All of the operational systems and safety systems for the 421-2 well will be provided with a real time monitoring capability at the RMS Operator Interface Terminals (OIT) located in the EOF control room. All Local Alarms and Shutdown Safeties for each well will be displayed at the RMS. Both wells will have the capability of being

shutdown remotely from the RMS, Operator Interface Terminal, and by the EOF  
Emergency Shutdown.

#### **1.4.6 Construction Activities**

Construction for the Project will involve the following sequence of events in which some of the tasks may occur concurrently.

- 1) Installation of electrical motor control panel, transformer, and power cable connections at the EOF;
- 2) Installation of Electric Submersible Pump (ESP) with tubing, packer and subsurface control equipment in well 421-2,
- 3) Installation of surface oil/water/gas separation, metering and control equipment at the 421-2 wellhead,
- 4) Pigging and clean-up of the existing six inch oil pipeline;
- 5) Cut-out and removal of two 90° bends within existing six inch oil pipeline; 5) insertion of two new two inch carrier pipelines within existing six inch oil line;
- 6) "Clamshell" restoration of existing six-inch pipeline at area where 90° bends removed;
- 7) Construction of new pipelines and containment on both piers;
- 8) Tie-in of pipelines to existing Line 96 oil pipeline and to existing Platform Holly utility line;
- 9) Trench excavation and installation of new power cables in existing access road;
- 10) Testing of pipelines and equipment;
- 11) Flushing and abandonment of existing buried flowlines; and
- 12) Work site restoration and cleanup.

The six-inch shipping line was flushed with water and hydro-tested in March 1994. It has not been used since. During the emergency repairs conducted in 2001, all other abandoned pipelines in the PRC421 access road were inspected, capped and left in place. Any field cuts will be made above a portable containment basin with a vacuum truck present to capture any fluid and prevent contamination to the surrounding environment. Insertion of the new plastic liner and the 2 two inch fiber-glass lines within the six inch shipping line will occur by placing the winches and spooling units at the

intermediate block valve location or either end of the pipeline minimizing the impact on the Golf Course activities. Burial of the new power cable under the access road through the golf course area is expected to take one day.

The construction activity will be most notable during the periods of inserting the plastic liner and the two new coiled tubing lines within the six inch pipeline, burial of the power cable and movement of workover rig to and from Pier 421-2. Each one of these operations should be very brief.

During the construction phase of the Project, all construction equipment and materials will be staged in an existing easement area immediately adjacent to the EOF west fence line. A 30-foot by 30-foot helipad at the south end of the EOF may also be used as an additional staging area for vehicles and material should the need arise.

The down hole well work associated with Well 421-2 is expected to take a maximum of 15 days. A portable well service rig will be placed over Well 421-2 and proceed to remove the tubing, packers and flow isolation valves that were placed in the well during pressure control operations. Well 421-2 will be equipped with an ESP and SSSV. The completion work for both wells will be based upon a program and procedure approved and witnessed by the CSLC.

Best Management Practices (BMP's) will be implemented through the construction phase. Venoco will implement site-specific construction mitigation plans, including a traffic minimization plan and equipment refueling plan.

## **1.5 PROJECT SCHEDULE**

It is anticipated that overall construction activities will require approximately 45 workdays following all project approvals. Unexpected delays could make these non-sequential days. As previously stated, oil production from the well is expected to last up to 12 years.

## **2.0 ALTERNATIVES ANALYSIS**

In accordance with section 15126.6 of the State CEQA Guidelines (California Governor's Office of Planning and Research 2001), an EIR must "describe a range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most the basic objectives of the Project, but would avoid or substantially lessen any of the significant effects of the Project, and evaluate the comparative merits of the alternatives." The State CEQA Guidelines also require that a No Project

Alternative be evaluated, and that under specific circumstances, an environmentally superior alternative be designated from among the remaining alternatives.

## **2.1 ALTERNATIVES PROPOSED FOR CONSIDERATION**

This section includes a description of alternatives and provides a comparative analysis of the potential impacts from the alternatives to those identified for the proposed Project.

### **2.1.1 Alternative Project Component-Processing at the Ellwood Onshore Facility**

Under this alternative component of the proposed Project, the processing of production fluids would occur at the EOF instead on Pier 421-2 into a GLCS.

### **2.1.2 No Project Alternative**

Under the No Project Alternative, the existing wells would remain shut-in and equipped with subsurface safety valves. There would be no oil production from PRC 421.

## **3.0 POTENTIAL ENVIRONMENTAL EFFECTS**

Although the design of the double walled pipelines should reduce chances for a spill to occur and installation of a leak detection sensor will shut the wells down in the event of a pipeline leak, the CSLC, acting as Lead Agency under the CEQA, has determined that: (1) there still is a reasonable possibility of an oil spill occurring from the oil production well during its lifespan; (2) such an oil spill could have a significant effect on the physical environment; and (3) other aspects of the project's construction and operations could also have a significant effect on the environment. Issues to be discussed in the EIR are described below. Proposed "Significance Criteria" that could be applied to each impact area are also listed.

### **3.1 VISUAL RESOURCES**

The area in which PRC 421 is located is surrounded by a golf course, the beach/ocean, and is considered scenic by local residents and visitors. The shoreline facilities are shielded by the coastal bluff and out of most public views. However, individuals frequenting the shoreline, the golf course or in vessels close to the shore may be sensitive to the visual impact of the modifications to Pier 421.2.

#### **Significance Criteria**

Visual impacts are considered significant if one or a combination of the following apply:

- The project is inconsistent with or in violation of public policies, goals, plans, laws, regulations or other directives concerning visual resources;
- Routine operations and maintenance visually contrast with or degrade the character of the viewshed; or
- The project results in a perceptible reduction of visual quality, lasting for more than one year that is seen from moderately to highly sensitive viewing positions. A perceptible reduction of visual quality occurs when, for a highly sensitive view, the visual condition is lowered by at least one Visual Modification Class (VMC); or for a moderately sensitive view, the condition is lowered by at least two VMCs.

### 3.2 AIR QUALITY

The Santa Barbara County Air Pollution Control District (SBCAPCD) monitors the PRC 421 lease area. The EIR will analyze:

- The sources of emissions that would be associated with the Project, the types and amounts of different pollutants that could be emitted, and the duration of the impact; and
- Potential impacts and mitigation measures associated with odor and toxic air contaminant emissions.

### Significance Criteria

The air quality impacts of the proposed Project would be significant if it:

- Contributes to an exceedance of localized Carbon Monoxide (CO) emissions in excess of the State Ambient Air Quality Standard i.e., 20 parts per million (ppm) for 1 hour (a single event or release) or 9 ppm for 8 hours (a continuous release);
- Results in emissions which exceed the following emission thresholds:
  - Reactive Organic Gases (ROG), 15 tons/year, 80 lbs/day,
  - Nitrogen Oxides, 15 tons/year, 80 lbs/day, and
  - PM<sub>10</sub> Particulates (suspended particulate matter 10 microns or less in diameter), 15 tons/year, 80 lbs/day;
- Allows uses that create objectionable odors that would be considered a nuisance under SBCAPCD Rule 303, or exceed the offsite concentrations identified in SBCAPCD Rule 310;
- Exposes sensitive receptors (including residential areas) or the general public to substantial levels of toxic air contaminants or objectionable odors; or
- Results in the accidental release of acutely hazardous air emissions.

### 3.3 BIOLOGICAL RESOURCES

Onshore sensitive biological resources include coastal scrub and wetland environments near the piers and along the onshore pipeline route and wintering and breeding habitat of the western snowy plover, a federally listed threatened species. Additionally, the

project area is located near the Santa Barbara Channel (Channel), an important migration route for marine mammals, fishes and seabirds. The area also contains diverse and rich assemblages of resident marine flora and fauna. Issues associated with the Project include:

- Its potential adverse effects on the on- and offshore environments in the event of an accidental oil spill or subsequent clean up activities, as well as adjacent wetland losses resulting from discharge or oil spills.

### **Significance Criteria**

An impact on biological resources will be considered significant if any of the following apply:

- There is a potential for any part of the population of a threatened, endangered, or candidate species to be directly affected or if its habitat is lost or disturbed;
- If a net loss occurs in the functional habitat value of: a sensitive biological habitat, including salt, freshwater, or brackish marsh; marine mammal haul-out or breeding area; eelgrass; river mouth; coastal lagoons or estuaries; seabird rookery; or Area of Special Biological Significance;
- There is a potential for the movement or migration of fish or wildlife to be impeded; or
- If a substantial loss occurs in the population or habitat of any native fish, wildlife, or vegetation or if there is an overall loss of biological diversity. Substantial is defined as any change that could be detected over natural variability.

### **3.4 COMMERCIAL AND SPORTS FISHERIES**

The marine resources in the Santa Barbara Channel support commercial fisheries, mariculture, and kelp harvesting; however, because the proposed Project is on the immediate coastline, potential effects to commercial and recreational fisheries would be minimal.

### **3.5 MINERAL RESOURCES/ENERGY**

The Project and/or alternatives have the potential to affect energy and mineral resources.

### **Significance Criteria**

A significant impact would occur if the project would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state;

- Conflict with the adopted California energy conservation plans; or
- Use non-renewable energy resources in a wasteful and inefficient manner.

### **3.6 GEOLOGICAL RESOURCES**

The PRC 421 wells are located on a coastal marine terrace, approximately 2,600 feet south of the active More Ranch Fault. The facility would be susceptible to damage as a result of an earthquake on this nearby fault or from several other faults active in the area. Seismically induced ground failure or other geologic hazards, such as corrosion or excessive coastal erosion, could result in an oil spill. . Remediation of such spills would, in turn, potentially cause soil erosion induced water quality impacts to nearby Devereux Slough and the Pacific Ocean.

#### **Significance Criteria**

Seismic effects could result in significant hazards to structures when facility design or construction is insufficient. Impacts are considered significant if any of the following conditions apply:

- Settlement of the soil that could substantially damage structural components of the wells;
- Ground motion due to a seismic event that could induce liquefaction, settlement, or a tsunami that could damage structural components;
- Deterioration of structural components of PRC 421 due to corrosion, weathering, fatigue, or erosion that could reduce structural stability; or
- Damage to petroleum pipelines and/or valves along the pipelines from any of the above conditions that could release crude oil into the environment.

### **3.7 HAZARDS AND HAZARDOUS MATERIALS**

This section will describe those aspects of the existing environment and structural integrity of the facilities that may impact operational safety, or that may be affected by an accident associated with the operation of the oil well, including the transportation of crude oil and petroleum products to and from the offshore facilities. Additionally, handling petroleum products has an inherent risk of accidents that may involve fire, explosions and/or spills. The EIR will address the potential adverse health consequences, e.g., exposure to toxic and hazardous substances, fire, explosions or spills in conjunction with continued use of the facility. The analyses will include

- Evaluation of the risk of an accident/explosion and release of hazardous substances and the impact on plant and animal life;

- Evaluation of the human and technological safety of oil wells, pipelines, and processing facility operations;
- Evaluation of the project's oil spill prevention and response and hazardous materials plans and their effectiveness, with emphasis on prevention, equipment and deployment capabilities and procedures; and
- Modeling of the spread of an oil spill, which could occur, and evaluation of its potential impact on plant and animal life under different current conditions and seasonal variations.

## **Significance Criteria**

A hazards and/or hazardous materials impact is considered significant if any of the following apply:

- If the existing facility does not conform to its oil spill contingency plans or other plans that are in effect; or if current or future operations may not be consistent with federal, state or local regulations. Conformance with regulations does not necessarily mean that there are not significant impacts;
- There is a potential for fires, explosions, releases of flammable or toxic materials, or other accidents from the wells or pipelines that could cause injury or death to members of the public;
- Existing and proposed emergency response capabilities are not adequate to effectively mitigate spills and other accident conditions.

Although the potential for oil or product spills will be discussed in this section, the potential impact of spills will also be analyzed in other, appropriate resource-related sections e.g., marine biology, water quality, land and recreation uses.

## **3.8 HYDROLOGY, WATER RESOURCES AND WATER QUALITY**

The significance of impacts will be considered in the context of whether PRC 421 operations would likely result in pollutant levels above ambient water quality and sediment levels that would exceed water quality objectives of the Central Coast Regional Water Quality Control Board or the State Water Resources Control Board.

Resumption of oil production could result in oil spills due to geologic hazards, mechanical failure, structural failure, or human error. Such spills could potentially result in water quality impacts the beach, shallow groundwater, and the Pacific Ocean. Potential impacts to the marine environment include increased water column turbidity and the introduction of toxic contaminants into the water column.

## Significance Criteria

Impacts to marine water quality are considered significant if any of the following apply:

- The water quality objectives contained in the Water Quality Control Plan for the Central Coast are exceeded;
- The water quality objectives in the California Ocean Plan (SWRCB 1997) are exceeded;
- The water quality criteria in the Proposed California Toxics Rule (EPA 1997) are exceeded;
- Project operations or discharges that change background levels of chemical and physical constituents or elevate turbidity producing long-term changes in the receiving environment of the site, area, or region, thereby impairing the beneficial uses of the receiving water occur; or
- Contaminant levels in the water column, sediment, or biota are increased to levels shown to have the potential to cause harm to marine organisms even if the levels do not exceed formal objectives in the Water Quality Control Plan.

### 3.9 LAND USE, PLANNING AND RECREATION

Returning PRC 421.2 to production will be examined in light of existing and planned land uses in the Goleta coastal area, including existing and potential shoreline and water-related recreational use.

## Significance Criteria

Land use/recreational impacts will be considered significant if the project would result in the following:

- Conflicts with adopted land use plans, policies, or ordinances;
- Result in conflicts with planning efforts to protect the recreational resources of the project area;
- Incompatible adjacent land uses as defined by planning documentation; or
- Residual impacts on sensitive shoreline lands, and/or water and non-water recreation due to a release of oil.

### 3.10 NOISE

The use of a downhole ESP pump will eliminate the surface pumping equipment and therefore the noise associated with the previous oil pumping equipment. However, construction activities may generate noise to sensitive receptors.

## Significance Criteria

A noise impact is considered significant if:

- Noise levels from project construction activities exceed criteria defined in a noise ordinance or general plan of the local jurisdiction in which the activity occurs or may have direct or indirect affects.

### 3.11 FIRE PROTECTION/EMERGENCY (OIL SPILL) RESPONSE

The CSLC has determined that there is a reasonable possibility of an oil spill occurring from Well 421.2 during its projected operational life. . This could have a significant effect on the physical environment and require additional fire protection and emergency response services.

## Significance Criteria

Impacts to fire protection and emergency response services would be considered significant if:

- Continued operation of the project creates the need for one or more additional personnel to maintain the current level of fire protection and emergency response services.

### 3.12 VEHICULAR TRANSPORTATION

The Project is not expected to have significant effects on transportation or circulation in the area. However, the potential for impacts associated with construction and work over activities will be examined.

## Significance Criteria

Traffic impacts would be considered significant if any of the following apply:

- Project traffic or construction must use an access road that is already at or exceeds Level of Service (LOS) E or brings a roadway down to LOS E; or
- Results in a roadway being degraded to a higher LOS as a result of the project.

### 3.13 CULTURAL RESOURCES

The State CEQA Guidelines (section 15064.5) define "historical resources" as follows:

Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant

in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in the light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource has integrity and meets the criteria for listing on the California Register of Historical Resources as follows:

- (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- (B) Is associated with the lives of persons important in our past;
- (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- (D) Has yielded, or may be likely to yield, information important in prehistory or history.

### **Significance Criteria**

Thresholds of significance for cultural resource impacts for the project are defined as situations where construction or operation of the project could:

- Result in damage to, the disruption of, or adversely affect a property that is listed in the California Register of Historical Resources (CRHR) or a local register of historical resources as per Section 5020.1 of the Public Resources Code;
- Cause damage to, disrupt, or adversely affect an important prehistoric or historic archaeological resource such that its integrity could be compromised or eligibility for future listing on the CRHR diminished; or
- Cause damage to or diminish the significance of an important historical resource such that its integrity could be compromised or eligibility for future listing on the CRHR diminish.

### **3.14 ENVIRONMENTAL JUSTICE**

The CSLC developed and adopted an Environmental Justice Policy to ensure equity and fairness in its own processes and procedures. This policy stresses equitable treatment of all members of the public and commits to consider environmental justice in its processes, decision-making, and regulatory affairs which is implemented, in part, through identification of, and communication with, relevant populations that could be adversely and disproportionately impacted by CSLC projects or programs, and by

1 ensuring that a range of reasonable alternatives is identified that would minimize or  
2 eliminate environmental impacts affecting such populations.

3 This portion of the EIR will analyze the distributional patterns of high-minority and low-  
4 income populations on a regional basis. The analysis will focus on whether the  
5 proposed project's impacts will have the potential to affect an area(s) of high-minority  
6 population(s) and low-income communities disproportionately, thereby creating an  
7 environmental justice impact.

### 8 **Significance Criteria**

9 An environmental justice impact would be considered significant if the proposed Project  
10 would:

- 11 • Have a potential to disproportionately impact minority and/or low-income  
12 populations at levels exceeding the corresponding medians for the County in  
13 which the project is located; or
- 14 • Result in a substantial disproportionate decrease in the employment and  
15 economic base of minority and/or low-income populations residing in the County  
16 and/or immediately surrounding cities.

### 17 **3.15 CUMULATIVE EFFECTS**

18 In accordance with the CEQA section 15130, the EIR will discuss the cumulative  
19 impacts of the proposed Project and address the likelihood of occurrence and severity  
20 of the potential impacts. The EIR will discuss other oil production operating in the area,  
21 foreseeable projects in the general vicinity, and projects in or near PRC 421.

## INDEX TO NOP COMMENTS

Appendix B includes a copy of the Notice of Preparation (NOP) for the proposed Project, transcripts from the Public Scoping Hearings conducted on the NOP, copies of all comment letters received on the NOP during the public comment period, and an indication (Section or sub-Section) where each individual comment is addressed in the Draft EIR. **Table B-1** lists all comments and shows the comment set identification number for each letter or commenter. **Table B-2** identifies the location where each individual comment is addressed in the Draft EIR. Comment letters are presented chronologically followed by the transcripts from the Public Hearing, and errata and minor text clarifications. The comments from the Applicant are presented at the end of the comment letters.

**Table B-1**  
**NOP Commenters and Comment Set Numbers**

Agency /Affiliation	Name of Commenter	Date of Comment	NOP Comment Set
California Coastal Commission	Tom Luster	7/5/05	1
California Department of Fish and Game	Morgan Wehtje	7/5/05	2
League of Women Voters of Santa Barbara, Inc.	Jean Holmes	7/5/05	3
Property	Kathleen Gebhardt	7/2/05	4
Citizens for Goleta Valley	Diane Conn	7/5/05	5
Santa Barbara County Air Pollution Control District	Bobbie Bratz	6/28/05	6
County of Santa Barbara Planning and Development, Energy Division	Nicole Horn	6/29/05	7
City of Goleta	Ken Curtis	6/30/05	8
David K. Sangster	David K. Sangster	7/05/05	9
Transcript from NOP Public Hearing 6/23/05 at 4:10 pm	Various	6/23/05	10
Transcript from NOP Public Hearing 6/23/05 at 5:10 pm	Various	6/23/05	11
Transcript from NOP Public Hearing 6/23/05 at 6:10 pm	Various	6/23/05	12

**Table B-2  
Responses to the NOP Comments**

Comment #	Responses
<b>Comments from California Coastal Commission</b>	
<b>1-01</b>	Comment noted.
<b>1-02</b>	The EIR now includes 5 alternatives, consistent with CEQA requirements that an EIR analyze a reasonable range of alternatives. This includes several technical alternatives, including different methods of oil separation or processing and produced water disposal. The EIR contains extensive discussion of affects upon biological resources and at least one technical alternative which reduces adverse affects on such resources. See Section 3, Alternatives and Cumulative Projects for a discussion of alternatives and Sections 4.1-4.15, Environmental Analysis for a discussion of the environmental consequences of these alternatives.
<b>1-03</b>	The EIR discusses issues related to project history and aging project infrastructure in Section 2.0, Project Description and contains an assessment of facility adequacy and associated safety issues in Section 4.2 Safety.
<b>1-04</b>	Sections 4.6 and 4.7, Marine Biological Resources and Terrestrial Biological Resources address impacts to biological resources that could result from project-related construction activities and the presence and normal operation of the proposed project.
<b>1-05</b>	Section 4.1, Geologic Resources addresses geologic and seismic risks associated with the proposed project site, including earthquakes and ground movement, coastal erosion, and tsunamis, and describes the potential of such impacts and provides mitigation measures to reduce such impacts.
<b>Comments from California Department of Fish and Game</b>	
<b>2-021</b>	A complete analysis of flora and fauna within and adjacent to the project area can be found in Sections 4.6 and 4.7, which address impacts to marine and terrestrial biological resources. These sections include a discussion on unique and sensitive species and the CNDDB was utilized to support the analysis.
<b>2-02</b>	Sections 4.6 and 4.7 discuss direct, indirect and cumulative impacts to marine and terrestrial biological resources and provide mitigation measures to reduce impacts to these resources. The discussions in these sections address rare and unique species in the region, impacts of the project on off-site habitats and populations, and analysis of cumulative impacts. Where applicable, mitigation measures have been proposed to reduce impacts.
<b>2-03</b>	Each resource section included mitigation measures designed to minimize significant adverse impacts. Mitigation measures applicable to impacts on sensitive plants, animals, and habitats can be found in Sections 4.6 and 4.7, Marine and Terrestrial Biological Resources.
<b>2-04</b>	A wide range of project alternatives was considered in this EIR, including the full analysis of five alternatives (See Section 3, Alternatives and Cumulative Projects). The No Project and No Project with Pressure Testing Alternatives would reduce impacts to biological resources.
<b>2-05</b>	Implementation of the proposed Project is not expected to result in a "take" of sensitive species of plants and animals.
<b>2-06</b>	The proposed Project would not alter or eliminate any watercourses in the area (See Section 4.4, Hydrology, Water Quality and Water Resources).

**Table B-2  
Responses to the NOP Comments**

Comment #	Responses
<b>League of Women Voters of Santa Barbara</b>	
<b>3-01</b>	Section 4.4, Air Quality addresses impacts to local air quality.
<b>3-02</b>	Sections 4.6 and 4.6, Marine and Terrestrial Biological Resources include mitigation measures to reduce impacts of oil spills on local biological resources. A description of daily inspections of project facilities is included in Section 2.0, Project Description.
<b>3-03</b>	Cumulative projects are identified in Section 3.4, Cumulative projects. Cumulative impacts to each resource area are discussed in each resource analysis in Section 4.0.
<b>3-04</b>	The No Project Alternative is analyzed in each resource section in Section 4.0
<b>Kathleen Gebhardt</b>	
<b>4-01</b>	Impacts to aesthetics are addressed in Section 4.12, Aesthetic/Visual Resources and addresses impacts to tourists and walkers.
<b>4-02</b>	Potential project impacts to air quality and associated odors are discussed in section 4.4, Air Quality. The proposed Project produces sweet crude with extremely minimal concentrations of hydrogen sulfide and thus would add only minimally to existing odor issues at the EMT. The project would not utilize the EOF.
<b>4-03</b>	Section 4.2, Safety addresses hazards; Section 4.4, Air Quality addresses impacts to air quality.
<b>4-04</b>	Section 2.0, Project Description describes the various transportation options available for this project.
<b>4-05</b>	A discussion on the number of truck trips needed to support the Project can be found in Section 2.0, Project Description. A discussion on the safety of the EOF can be found in Section 4.2, Safety in the alternatives analysis on processing at the EOF.
<b>4-06</b>	The No Project alternative is described in Section 3.0, Alternatives and Cumulative Projects and analyzed in each resource section of Section 4.
<b>Citizens for Goleta Valley</b>	
<b>5-01</b>	
<b>5-02</b>	See Section 4.2, Safety for an analysis on the structural integrity of the Project facilities.
<b>5-03</b>	See Section 2.0, Project Description for details on the location of the cables and on all construction activities.
<b>5-04</b>	See Section 4.7, Land Use for a discussion on current zoning restrictions. See Section 4.8, Noise for a discussion on noise impacts. See Section 4.9, Aesthetics and Visual Resources for a discussion of impacts from lighting. See Section 2.0, Project description for a description of the transportation of water and gas for reinjection and Section 3.0, Alternatives and Cumulative Projects for a discussion of alternative water and gas reinjection options.
<b>5-05</b>	See Section 4.8, Land Use for an analysis of conflicts with zoning ordinances. Leaks from Line 96 are addressed fully in the EMT EIR and are summarized in Section 4.2, Safety.
<b>5-06</b>	See Section 2.0, Project description for a description of the flow lines and construction period.
<b>5-07</b>	See Section 4.5, Hydrology and Water Resources restrictions on construction activities occurring in the rain.
<b>5-08</b>	See Section 2.0 for a description of transportation options after decommissioning of

**Table B-2  
Responses to the NOP Comments**

Comment #	Responses
	the EMT, including transportation by pipeline to the AAPL. Also, see Section 4.8, Land Use for a discussion of policies regarding pipeline transportation. Sections 1, 2 and 4.0 set forth the relationship of this project to the EMT and provide details on the assumptions and issues surrounding the project's use of the EMT for shipment of oil as well as other transportation options.
<b>5-09</b>	The probability and ranges of sizes for potential oil spills are addressed in Section 4.2, Safety. The affects of oil spills on the marine environment are discussed in detail in Section 4.6, Marine Biological Resources.
<b>5-10</b>	The EIR contains a number references to the nearby Ellwood Mesa, associated resources and potential project impacts upon this important community resource; see Sections 4.6, Marine Biological Resources; 4.7 Terrestrial Biological Resources; Section 4.8, Land Use, Planning, and Recreation; and Section 4.12, Aesthetic/Visual Resources.
<b>5-11</b>	For a discussion on air quality impacts, see Section 4.4, Air Quality.
<b>5-12</b>	See Sections 4.6 and 4.7 for a discussion of Project impacts to marine and terrestrial biological impacts.
<b>5-13</b>	See Section 4.15 for an analysis of impacts to commercial fishing.
<b>5-14</b>	See Section 4.6, Marine Biological Resources, for a discussion of noise impacts to marine mammals.
<b>5-15</b>	See Section 4.10, Public Services for response times.
<b>5-16</b>	See Section 4.13, Cultural Resources for procedures to be followed should cultural resources be discovered during construction activities.
<b>5-17</b>	See Section 4.15, Environmental Justice for a discussion on impacts to low-income populations and minorities
<b>5-18</b>	General impacts to emissions related affects on human health are addressed in Section 4.4, Air Quality.
<b>Santa Barbara County Air Pollution Control District</b>	
<b>6-01</b>	Section 4.4, Air Quality identifies all emissions associated with project related construction activities and discusses their potential relationship to required permits.
<b>6-02</b>	Section 4.4, Air Quality addresses all relevant project related construction and operational emissions; as discussed in that section, the project would have minimal construction related emissions, particularly those related to vehicular use or creation of fugitive dust.
<b>6-03</b>	Section 4.4, Air Quality identifies all emissions associated with project related construction and operational activities and discusses their potential relationship to required permits
<b>6-04</b>	Section 4.4, Air Quality identifies all emissions associated with project related construction.
<b>6-05</b>	Section 4.4, Air Quality identifies all emissions associated with project related construction activities and discusses their potential relationship to required permits.
<b>6-06</b>	Section 4.4, Air Quality identifies all emissions associated with project operation and discusses their potential relationship to required permits.
<b>6-07</b>	Section 4.4, Air Quality identifies all emissions associated with project operation and discusses their potential relationship to required permits.

**Table B-2  
Responses to the NOP Comments**

Comment #	Responses
<b>6-08</b>	Section 4.4, Air Quality identifies all emissions associated with project operation using the requested standards.
<b>County of Santa Barbara Planning and Development, Energy Division</b>	
<b>7-01</b>	Section 3.0, Alternatives and Cumulative Projects, assess a reasonable range of alternatives to the proposed Project, including several variations of the No Project Alternative.
<b>7-02</b>	The EMT EIR and its relationship to the proposed project is discussed throughout this EIR .
<b>City of Goleta</b>	
<b>8-01</b>	Section 3.0, Alternatives and Cumulative Projects, assess a reasonable range of alternatives to the proposed Project, including several variations of the No Project Alternative.
<b>8-02</b>	Section 4.8, Land Use, Planning, and Recreation, discusses the project's relationship to the City's recently adopted General Plan and the existing zoning ordinance.
<b>8-03</b>	Section 3.0, Alternatives and Cumulative Projects, assess a reasonable range of alternatives to the proposed Project, including identifying the Environmentally Superior Alternative
<b>8-04</b>	Section 4.2, Safety, provides a qualitative risk analysis which incorporates and updates relevant data from the existing Quantitative Risk Analysis from the Ellwood Onshore Facility and the findings of the EMT EIR.
<b>David K. Sangster</b>	
<b>9-01</b>	Section 4.2, Safety, provides a complete analysis of risks associated with recommissioning of PRC 421.
<b>9-02</b>	Section 2.3.4 in the Project Description provides details on caisson repairs.
<b>9-03</b>	Section 3.0, Alternatives and Cumulative Projects, assess a reasonable range of alternatives to the proposed Project, including several variations of the No Project Alternative, which briefly summarize potential safety issues.
<b>9-04</b>	Problems with historic oil facilities unrelated to Lease PRC 421, while important, are beyond the scope of this EIR. Removal of historic oil facilities, such as the historic timber bulkhead seawall, carries a wide range of environmental consequences. Please contact CSLC staff to discuss concerns regarding facilities unrelated to PRC 421.
<b>9-05</b>	Section 3.0, Alternatives and Cumulative Projects, assess a reasonable range of alternatives to the proposed Project, including several variations of the No Project Alternative. Immediate abandonment is not included in these alternatives. However, preparation of an abandonment plan would be required as a condition of approval of the recommissioning of PRC 412.
<b>9-06</b>	Section 2.0, Project Description, provides a complete discussion of the details of proposed improvements to Caisson 421-2. Preparation of a abandonment plan would be required as a condition of approval of the recommissioning of PRC 412 and is discussed in this section.
<b>9-07</b>	Section 4.2, Safety, and Section 4.4, Air Quality, discussion issues associated with the aging nature of project facilities.

**Table B-2  
Responses to the NOP Comments**

Comment #	Responses
	<b>Transcript from NOP Public Hearing 6/23/05 at 4:10 pm</b>
<b>10-01</b>	Section 1.4, Permits, Approvals, and Regulatory Requirements, describes level of involvement of the city of Goleta.
<b>10-02</b>	Section 2.2.3, Project Components, describes the condition of the existing 6" and the proposed pipeline enhancement procedures.
<b>10-03</b>	Anticipated Project start date is in 2008.
<b>10-04</b>	See Section 2.2.3, Project Components.
<b>10-05</b>	Future abandonment of the piers at PRC 421 will be assessed under a separate evaluation by the appropriate agencies.
<b>10-06</b>	Comment noted.
<b>10-07</b>	See Section 4.2.4, Safety, Impact Analysis and Mitigation, Impact S-4.
<b>10-08</b>	See Section 4.2.4, Safety, Impact Analysis and Mitigation, MM S-2a.
<b>10-09</b>	See Section 2.1.3, Existing Infrastructure at PRC 421, and Section 2.2, Proposed Project.
<b>10-10</b>	See Sections 4.2, Safety, 4.5, Hydrology, Water Resources, and Water Quality, and 4.7, Terrestrial Biological Resources.
<b>10-11</b>	See Section 3.3.6, Transportation Sub-Alternative Options.
<b>10-12</b>	Comment noted.
<b>10-13</b>	See Sections 4.1, Geological Resources, 4.3, Hazardous Materials, 4.5, Hydrology, Water Resources and Water Quality, 4.7, Terrestrial Biological Resources, and 4.8, Land Use, Planning, and Recreation.
<b>10-14</b>	PRC 421 is "sweet" and is not expected to exhibit odor related H <sub>2</sub> S problems.
<b>10-15</b>	Comment noted.
<b>10-16</b>	See Section 4.2, Safety, Impact Analysis and Mitigation, Impacts S-4 and S-5.
<b>10-17</b>	See Section 3.4, Cumulative Related Future Projects.
<b>10-18</b>	Comment noted.
<b>10-19</b>	See Section 4.2.4, Safety, Impact Analysis and Mitigation, MMs S-2a, S-2b, S-3a, and S-3b.
<b>10-20</b>	Comment noted, in close proximity rotting metal can be a source of H <sub>2</sub> S gas.
<b>10-21</b>	See Section 4.2.4, Safety, Impact Analysis and Mitigation, MMs S-2a, and S-2b.
<b>10-22</b>	Comment noted.
<b>10-23</b>	An evaluation of the facilities at the EMT is contained in the EMT EIR.
	<b>Transcript from NOP Public Hearing 6/23/05 at 5:10 pm</b>
<b>11-01</b>	Information not contained within the scope of this document.
<b>11-02</b>	See Section 4.2.1, Safety, Environmental Setting.
<b>11-03</b>	Comment noted.
<b>11-04</b>	See Section 1.2.4, Related Ellwood Area Oil Projects.
<b>11-05</b>	The city of Goleta is a permitting agency for this Project. See Section 2.0, Description of Proposed Project.

**Table B-2  
Responses to the NOP Comments**

Comment #	Responses
	<b>Transcript from NOP Public Hearing 6/23/05 at 6:10 pm</b>
<b>12-01</b>	Consultants are selected by the joint Review Panel.
<b>12-02</b>	See Section 2.4.1 Description of Proposed Project, Operational Procedures.
<b>12-03</b>	See Section 2.4.1 Description of Proposed Project, Operational Procedures.
<b>12-04</b>	See Section 2.4.1 Description of Proposed Project.
<b>12-05</b>	Comment noted.
<b>12-06</b>	See Section 4.2.4, Safety, Impact Analysis and Mitigation, MMs S-2a, and S-2b.